

Before the  
Federal Communications Commission  
Washington, D.C. 20554

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In the Matter of

Petition for Emergency Relief in 3G Sunset  
Transition for Central Station Alarm  
Subscribers

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) GN Docket No. 21-304  
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**OPPOSITION OF AT&T**

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AT&T opposes the petition of the Alarm Industry Communications Committee (“AICC”) to delay AT&T’s long-announced plans to sunset its 3G network in February 2022. Despite years of prior notice, AICC asserts that its members cannot meet AT&T’s sunset date because of disruptions attributable to COVID-19 and chipset supply-chain issues. That assertion is not credible. Time and again, the CEOs of leading alarm companies have told investors that, after an initial two-month blip, the COVID pandemic has *not* kept technicians out of people’s homes. If anything, they say, the pandemic *accelerated* the pace of new alarm system installations because customers were home for extended periods, valued home security more than before, and were satisfied with the alarm companies’ health and safety protocols. The same CEOs have also reassured investors that global chip shortages will not slow subscriber growth.

Having signed up new customers in record numbers, these alarm companies are fully capable of replacing 3G radios still used by existing customers. And barring an extension, each alarm company has strong incentives to replace those radios by AT&T’s long-planned February 2022 sunset, lest those existing customers take their business to competing alarm companies. History supports the same conclusion: alarm companies successfully managed the transition from 2G to 3G even though they issued similarly dire warnings about the 2G sunset. On the other hand, forcing AT&T to delay its 3G sunset would undercut its carefully planned 5G transition, waste valuable spectrum assets, and degrade network performance to the detriment of millions of ordinary AT&T wireless customers.

## **INTRODUCTION AND SUMMARY**

AT&T is working around the clock to bring the full promise of 5G to its customers nationwide. To succeed, AT&T will need to make optimally efficient use of its finite spectrum assets. It must promptly repurpose from 3G to 5G all of its 850 MHz spectrum—with its long-

range propagation and penetration characteristics—to boost network performance and prevent service outages across America. And it must therefore sunset its 850 MHz-based 3G network in February 2022.

AT&T is dedicated to helping its customers manage this transition. It has followed the same playbook it used when successfully retiring its 2G network in 2017: it has given its customers ample time to make the transition, issued multiple notices to them as the 3G sunset approaches, and extended special offers and support resources to help them switch to new devices. AT&T’s customers have largely responded by transitioning to 4G/LTE- and 5G-capable devices. But a relatively small number of AT&T customers, including the alarm-monitoring companies represented here by AICC, have been slow to upgrade devices that rely on AT&T’s 850 MHz-based 3G/UMTS network. Having dragged their heels for years, they now ask the Commission to delay AT&T’s long-planned 3G sunset.

If granted, that request would harm tens of millions of ordinary wireless consumers. UMTS, the legacy 3G technology that AT&T launched in 2004, makes far less efficient use of the public airwaves than its 4G and 5G successors. It also requires a provider to devote at least 10 megahertz of spectrum in paired 5x5 blocks (“channels”) to support even a single 3G user.<sup>1</sup> The lingering 3G customers who still occupy the 10 megahertz of 850 MHz spectrum that AT&T dedicates to them now utilize only 4% of AT&T’s total 3G network capacity because the overwhelming majority of customers have already migrated to 4G/LTE and 5G devices. The remaining 96% of capacity lies fallow because AT&T cannot support both 3G and newer technologies on the same channels.

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<sup>1</sup> A “5x5” block consists of five megahertz of spectrum for downlink transmissions (cell site to device) paired with a different five megahertz of spectrum for uplink transmissions (device to cell site).

Any delay in repurposing 850 MHz spectrum from 3G to 5G would thus waste critical spectrum resources at the precise moment when they are most needed to support a robust 5G rollout. To facilitate an orderly transition, AT&T forewarned its alarm company customers for years that it would discontinue its 3G network soon after launching its nationwide 5G network. Indeed, AT&T's contracts with leading alarm companies informed them as far back as 2016 that the 3G network would sunset as soon as the end of 2021. During that same period, equipment vendors and the trade press echoed the same industry-wide expectation. In short, the alarm industry knew of this impending 3G sunset well *before* February 2019, when AT&T served official notice that it would hold firm to a 3G sunset date in February 2022 and that alarm companies needed to act by then to replace the obsolete aughts-era technology in some of their devices.

With AT&T's support, the alarm companies can and will meet that deadline in most cases if they devote the necessary resources to the task. In the absence of regulatory intervention, competition among alarm companies will induce each of them to make the upgrades needed to keep its customers connected, lest those customers switch to another alarm company willing to install network-compatible devices before the 3G sunset date.

Some alarm companies, however, would prefer to avoid competing with one another for customers who still use obsolete 3G devices. They would rather defer the costs of upgrading that equipment for another year, at which point they might well assert that they need yet more time. The victims of such anticompetitive stonewalling would be the tens of millions of ordinary consumers who depend on AT&T to make optimal use of its share of the nation's scarce spectrum resources.

The petition filed here by AICC, the alarm companies' trade association, is thus not only anticompetitive, but inimical to the Commission's 5G deployment objectives. If the Commission were to grant that petition—which, as discussed below, it lacks authority to do in the first place—it would undercut AT&T's 5G plans and degrade the performance of AT&T's network, particularly in less densely populated areas.

The alarm companies' trade association nonetheless argues, contrary to all available evidence, that the long-known February 2022 deadline “cannot be met ... due to the time lost during the ongoing COVID pandemic.” AICC Petition (“Pet.”) ii. It says that “[t]he alarm industry has had great difficulty over the past fourteen months accessing protected premises in order to replace the 3G alarm radios, because most consumers and businesses are fearful of letting strangers into their homes or offices during COVID.” *Id.*

That statement crashes headlong into the alarm companies' own investor presentations. One after another, the CEOs of America's leading alarm companies have confirmed that 2020 was a banner year for them and that their success has continued to the present day. *See* Section III.B, *infra*. To be sure, business was significantly interrupted in March and April of 2020, when the pandemic took America by surprise and before the medical community reached consensus on effective safety protocols such as mask-wearing. But by their own accounts, the alarm companies' business began recovering as early as May 2020 and, by the summer and fall, technicians were installing residential alarm systems at a record pace, exceeding even pre-pandemic forecasts.

Indeed, several alarm companies credited the pandemic for *accelerating* new alarm installations. As one senior industry executive told investors, “COVID meant people were home” and made them more eager than before to purchase security products, so “it was easier in many

ways ... to get their time and attention.”<sup>2</sup> He added: “Customer[s] got very comfortable with the sort of COVID precautions that our service providers were taking for installation and for sales.”<sup>3</sup> Moreover, the nation’s leading alarm company, ADT, has acknowledged its intention to migrate its customers before the 3G sunset and has taken effective steps to do so. As ADT’s CEO claimed earlier this year, “we’re on track” to complete ADT’s 3G-to-4G “radio conversion” project by applicable deadlines.<sup>4</sup> ADT’s competitors have no excuse for failing to keep pace and, in fact, have every incentive to catch up—provided the Commission denies AICC’s petition.

In short, starting in the late spring of 2020, alarm companies could and did resume sending technicians into customer premises to install *new* home-alarm systems and avail themselves of other profitable opportunities, and they have done so at an unprecedented pace. Some of them have simply prioritized those lucrative new customer opportunities over the less profitable task of keeping legacy 3G alarm customers connected after the 3G sunset. Only those alarm companies’ self-interested financial calculus, not a widespread inability to enter customer locations, has delayed their progress towards that goal.

Similar observations undermine AICC’s alternative argument that microchip supply constraints independently justify an extension. AICC bears the burden of production and persuasion in this proceeding; it is the party asking the Commission to subvert AT&T’s meticulously choreographed 5G transition. Yet on this issue and others, the petition offers

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<sup>2</sup> Alarm.com Holdings, Inc., FQ4 2020 Earnings Call Transcripts at 14 (S&P Glob. Mkt. Intel. Feb. 25, 2021).

<sup>3</sup> *Id.*

<sup>4</sup> ADT Inc., FQ4 2020 Earnings Call Transcripts at 12-13 (S&P Glob. Mkt. Intel. Feb. 25, 2021); *see also* ADT Inc., FQ1 2021 Earnings Call Transcripts at 6 (S&P Glob. Mkt. Intel. May 5, 2021) (CEO reaffirming that “[o]ur 3G radio conversations remain on schedule,” despite “complexities” posed by “worldwide chip shortages”); *id.* at 7 (CFO stating that “we made solid progress on 3G conversions in the first quarter, during which we converted more than 500,000 radios”).

nothing beyond breezy and unsupported lawyer assertions. For example, AICC has not even tried to substantiate its premises that (1) supply shortages affect the *particular chipsets* that alarm companies need for simple 4G connectivity and (2) the asserted shortages make those chipsets *unavailable* as opposed to simply *more expensive*.

There is likely good reason for that lack of substantiation: the facts do not support AICC's claims. And whatever the scope of the global chip shortage, it has not prevented alarm companies from continued success in winning customers for new alarm systems. As Alarm.com's CEO explained earlier this month, in response to a question about the chip shortage: "[W]e have ... about 85%, 90% of what we would like to have floating around. So are there shortages of some components? Yes. There are shortages of some components. *Are they materially impacting the commercial service providers today? No.*"<sup>5</sup>

In sum, the alarm industry will have every incentive to upgrade obsolete 3G devices before AT&T's 3G sunset if the Commission allows market forces—mutual competition among alarm companies for one another's customers—to take their course. In contrast, granting the alarm industry's petition would subvert one of the Commission's greatest priorities: expediting deployment of the highest quality 5G services throughout America, including in suburban and rural areas.

## **ARGUMENT**

### **I. THE COMMISSION LACKS STATUTORY AUTHORITY TO STALL AT&T'S 3G-TO-5G TRANSITION PLANS.**

As a threshold matter, the Commission lacks statutory authority to grant the relief AICC seeks here. AICC argues that AT&T is "a common carrier" under Title II of the Communications

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<sup>5</sup> Alarm.com Holdings, Inc., FQ2 2021 Earnings Call Transcripts at 12 (S&P Glob. Mkt. Intel. Aug. 5, 2021) (emphasis added).



Act and thus is subject to “a duty ... to furnish communications services subject to Title II ‘upon reasonable request.’” Pet. 22 (citing 47 U.S.C. § 201(a)). To begin with, AICC’s request to delay the long-announced 3G-to-5G transition for 850 MHz spectrum would not be “reasonable” even if Title II applied, as discussed in Sections II and III below. Equally important, the enterprise IoT services that alarm companies purchase from AT&T are *not* common carrier services subject to Title II obligations and oversight. That is so for two independent reasons.

*First*, Section 3(51) of the Communications Act authorizes the Commission to impose Title II obligations on AT&T “only to the extent that it is engaged in providing telecommunications services”—*i.e.*, common carrier services.<sup>6</sup> The enterprise IoT services at issue, however, are *private* carriage services. As explained in the Declaration of Lisa Park (Ex. A) (“Park Decl.”), AT&T provides the overwhelming majority of IoT connections—as well as the overwhelming majority of alarm-company connections in particular—pursuant to individually negotiated contracts with sophisticated business customers, not as part of “an indifferent holding out” to the public at large on standardized terms.<sup>7</sup> Section 3(51) explicitly prohibits the Commission from subjecting such private carriage services to Title II regulation.

*Second*, Section 332(c)(2) independently precludes Title II regulation of the relevant IoT services because they are not interconnected with the public switched network. IoT services are inherently mobile in nature, and their most prevalent uses are in fact mobile, even though alarm companies may not avail themselves of that mobility for every customer. Park Decl. ¶ 4. Each of

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<sup>6</sup> 47 U.S.C. § 153(51); *see V.I. Tel. Corp. v. FCC*, 198 F.3d 921 (D.C. Cir. 1999) (addressing identity between “common carrier services” and “telecommunications services”).

<sup>7</sup> *Id.* ¶¶ 2, 3; *see Nat’l Ass’n of Regul. Util. Comm’rs v. FCC*, 525 F.2d 630, 642 (D.C. Cir. 1976) (distinguishing between common carriage and private carriage); *see also id.* at 641 (“[A] carrier will not be a common carrier where its practice is to make individualized decisions, in particular cases, whether and on what terms to deal.”); Report and Order, *Bus. Data Servs. in an Internet Protocol Env’t*, 32 FCC Rcd. 3459, ¶ 268 (2017) (addressing same distinction).

these IoT services consists of two elements: a SIM card and connectivity to AT&T's mobile network. These services are sold not only to alarm companies, but also—indeed, overwhelmingly—to business customers that use them for mobile purposes, such as tracking packages, shipping containers, land fleets, and farm equipment. *See id.* They are thus “mobile services” for purposes of the Communications Act.<sup>8</sup> Yet they are not “*commercial* mobile service[s]” subject to common carrier regulation because they are not “interconnected with the public switched network.”<sup>9</sup> They are instead point-to-point services that connect an individual IoT device with a system operated by one of AT&T's IoT business customers. *See* Park Decl. ¶ 5. These services are thus properly classified as “*private* mobile services” and, as such, are categorically exempt from common carrier regulation under Section 332(c)(2).<sup>10</sup>

There is likewise no merit to the petition's oblique reliance (at 20) on the Commission's Title I ancillary authority. Such authority is available only “to support [the Commission's] exercise of a *specifically delegated power*” under a substantive provision of the Communications Act rather than “to pursue a stand-alone policy objective.”<sup>11</sup> Here, there is no “specifically

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<sup>8</sup> *See* 47 U.S.C. § 153(33) (defining “mobile service” as involving “mobile stations”); *id.* § 153(34) (defining “mobile station” as “a radio-communication station capable of being moved and which ordinarily does move”); *V.I. Tel.*, 198 F.3d at 923-26 (upholding FCC determination that statutory classification turns on what service a provider offers, not on what use a purchasing customer makes of it).

<sup>9</sup> 47 U.S.C. § 332(d)(1)-(2) (emphasis added). The Commission's rules define “interconnected service” as a service “[t]hat is interconnected with the public switched network” and “gives subscribers the capability to communicate to or receive communication from *all other users* on the public switched network” (or “restricts [such] access [only] in certain limited ways”). 47 C.F.R. § 20.3 (emphasis added). AT&T's IoT services do not themselves enable customers to communicate with “all other users” on the public switched network; for example, no one can call friends and family from an ordinary alarm console.

<sup>10</sup> 47 U.S.C. § 332(c)(2) (“A person engaged in the provision of a service that is a private mobile service shall not, insofar as such person is so engaged, be treated as a common carrier for any purpose under this chapter.”).

<sup>11</sup> *Comcast Corp. v. FCC*, 600 F.3d 642, 659 (D.C. Cir. 2010) (emphasis added). In the “several extraordinary [pandemic-related] actions” cited by AICC (at 21), the Commission did not order providers to do anything beyond the scope of its statutory authority; instead, it *relaxed* regulatory impediments that providers otherwise would have faced when deploying critical infrastructure.

delegated power” to which regulations protecting alarm-monitoring companies could be “ancillary.” Although Section 1 of the Act does cite “promoting safety of life and property” as one of the Act’s objectives, it does not authorize the Commission to force companies against their will to provide any service. In all events, AT&T *has* committed to providing 4G or 5G connectivity services to any alarm company that requests them; it simply announced long ago that, in February 2022, it will stop wasting its scarce spectrum assets to support now-obsolete 3G technologies.

## **II. COMPELLING AT&T TO DELAY ITS 3G SUNSET WOULD IMPEDE AMERICA’S 5G ROLLOUT.**

Even if the Commission had legal authority to order a delay in AT&T’s 3G sunset, there would be no sensible policy basis for doing so. As discussed in this Section and in the attached declaration of AT&T network engineer Kevin Hetrick (Ex. B) (“Hetrick Decl.”), the alarm industry’s proposal to delay the 3G sunset would impair AT&T’s 5G rollout and degrade its network performance to the detriment of tens of millions of American consumers. Section III below then explains that the alarm industry has identified no valid basis for causing that harm.

In nearly all markets, AT&T currently splits its 850 MHz spectrum holdings between two technologies: 10 megahertz for 3G and 10 megahertz for 5G. In each case, the relevant 10 megahertz slice is subdivided into five megahertz for uplink and five megahertz for downlink, in what are known as “5x5” channels. Because 5G traffic volumes are rapidly escalating, AT&T plans to expand its 5G network capacity before year’s end by adding blocks of C-Band (3.7 GHz) spectrum. The capacity increase, however, will not extend throughout AT&T’s current 850 MHz 5G footprint. Compared to low-band spectrum, the shorter propagation of C-Band signals reduces their ability to support communications in less populous areas, particularly for low-power uplink transmissions from handsets to towers. As a result, consumers passing near the

edge of a C-Band coverage area will need to rely solely on 850 MHz spectrum for uplink 5G transmissions.<sup>12</sup>

The five-megahertz 850 MHz uplink channel currently dedicated to 5G, however, will be insufficient to support expected 5G traffic volumes during 2022. AT&T thus plans to double its allocation of low-band spectrum to 5G by repurposing the 10 megahertz of 850 MHz spectrum that is still used for the obsolete 3G technologies at issue here. It will combine that 10 megahertz of spectrum currently used for 3G with the 10 megahertz already used for 5G, thus creating a total of 20 megahertz for 5G, in the form of 10x10 uplink/downlink channels.<sup>13</sup> Doubling the 850 MHz spectrum available in this manner will increase the 5G network's uplink and downlink capacity, greatly improving the performance and efficiency of AT&T's network for the benefit of its tens of millions of customers.<sup>14</sup>

This plan cannot proceed, however, so long as AT&T must keep operating its 3G network, even for a single legacy 3G user. AT&T has used UMTS as its 3G standard since 2004. UMTS requires, at a minimum, 10 megahertz of paired 5x5 channels—five megahertz for uplink and five megahertz for downlink. Because it is not feasible as an engineering matter to support both UMTS and 5G standards on the same 5x5 channels, AT&T has for many years reserved this 10-megahertz block of spectrum solely for 3G even as the number of customers using its 3G network dwindled. Continuing to reserve that spectrum for 3G is now grossly inefficient: 3G

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<sup>12</sup> Hetrick Decl. ¶¶ 2–4. Although any provider could theoretically fill in coverage gaps by exponentially increasing the number of its cellsites across the United States, that is not an economically feasible means of providing affordable mobile services to American consumers. And even if the costs were manageable, the logistical challenges—including identification of hundreds of thousands of new cellsite locations, acquisition of all necessary leases and zoning permits, and actual site construction—would take years.

<sup>13</sup> *Id.* ¶¶ 4–5.

<sup>14</sup> *Id.* ¶ 5.

traffic today utilizes less than 4% of the capacity of that 10-megahertz block. In short, AT&T cannot repurpose that critical 850 MHz spectrum for 5G until after it shuts down the 3G network.<sup>15</sup>

The alarm industry’s proposed ten-plus month delay in AT&T’s 3G sunset date would undercut AT&T’s 5G rollout and overall network performance. In particular, the failure to upgrade AT&T’s current 5x5 megahertz channels of 850 MHz spectrum into 10x10 megahertz channels would increase the rate of busy-hour “blocking” in cell sectors across virtually all geographic markets. In affected areas, the result would be more blocked and dropped calls and a decrease in data throughput. Such network degradation could affect tens of millions of customers over the course of 2022 if this petition were granted.<sup>16</sup>

Finally, the alarm industry ignores engineering realities when it claims that its proposed sunset delay would place AT&T at no competitive disadvantage with Verizon, which has announced a year-end 2022 3G sunset date. Pet. 18. Unlike AT&T, Verizon does *not* use UMTS as its legacy 3G standard; it uses CDMA, which can operate with only 1.25 megahertz uplink and downlink channels, far narrower slices of spectrum than the 5x5 required for UMTS.<sup>17</sup> Thus, unlike AT&T, Verizon appears capable of dedicating the lion’s share of its 850 MHz spectrum to *5G while still supporting legacy 3G users*. In any event, it makes no sense to extrapolate from

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<sup>15</sup> *Id.* ¶ 6.

<sup>16</sup> *Id.* ¶ 7. Although AT&T has spectrum holdings in other bands, it cannot repurpose them (instead of 850 MHz spectrum) for 5G within the foreseeable future. Instead, AT&T must continue using those bands to support an embedded base of tens of millions of customers—including alarm companies, other enterprise customers, and ordinary consumers—who rely on AT&T’s 4G/LTE network for network connectivity. AT&T will need to maintain its 4G/LTE network on existing spectrum bands for years to come, given the sheer volume of devices in operation today that are not 5G-capable. *Id.* ¶ 8. In all events, AT&T could not suddenly substitute other bands for 850 MHz spectrum in its 5G rollout even if those bands suddenly freed up. Network migrations take years of planning, and the ecosystem is locked into an 850 MHz 5G solution for AT&T tower equipment and customer devices.

<sup>17</sup> See Hetrick Decl. ¶ 9.

one wireless provider's migration path to another. Each provider's spectrum portfolio is unique, consisting of diverse spectrum holdings, and each must follow a migration strategy for its 5G rollout that is tailored to its particular holdings.<sup>18</sup>

### **III. DELAYING THE 5G ROLLOUT IS UNNECESSARY TO PROTECT ALARM CUSTOMERS.**

On the other side of the cost-benefit ledger, the alarm industry provides no basis for its assertion that delaying AT&T's 3G sunset date is necessary to prevent harm to anyone or anything apart from the alarm companies' own profit margins.

#### **A. Alarm Companies Have Long Been on Notice of the Impending 3G Sunset.**

The alarm companies have known for many years that, like the 1G and 2G networks before it, AT&T's 3G network would sunset soon after it fell two generations behind the newest technology deployed nationwide (5G). Indeed, the industry knew *well before* February 2019, when AT&T formally announced a February 2022 sunset to all of its business customers, that AT&T would sunset its 3G network on or before that date, despite the petition's implausible suggestion that the industry was somehow surprised by that announcement (*see* Pet. 5, 16). Starting before AT&T's 2G sunset on January 1, 2017 and continuing today, AT&T and its alarm company customers have engaged in a continuing dialogue about network technology transitions in general and the 3G sunset in particular. That dialogue is evidenced, for example, in contracts that AT&T entered into with leading alarm companies in 2016, 2017, and 2018. Those contracts explicitly declared that AT&T's 3G network would "be made available at least until

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<sup>18</sup> T-Mobile plans to discontinue the legacy Sprint 3G network in January 2022, *see* T-Mobile USA, Inc., *T-Mobile Network Evolution*, <https://www.t-mobile.com/support/coverage/t-mobile-network-evolution> (last visited Aug. 24, 2021), and, according to press accounts, will sunset its own legacy 3G network in either October 2021 or (according to "a new tip") April 2022, Daniel Petrov, *T-Mobile, Verizon, AT&T, and Sprint 2G/3G/4G LTE Network Shutdown Dates: The Sunset!*, PhoneArena.com (Aug. 10, 2021), [https://www.phonearena.com/news/t-mobile-verizon-att-sprint-2g-3g-4g-lte-network-shut-down-date\\_id134159](https://www.phonearena.com/news/t-mobile-verizon-att-sprint-2g-3g-4g-lte-network-shut-down-date_id134159).

December 31, 2021” but that AT&T otherwise “is not obligated to maintain any particular technology” and “may ... terminate 3G ... at any time in its sole discretion.”<sup>19</sup>

During the same period, the alarm industry trade press confirmed this industry-wide expectation that 3G networks would sunset by year-end 2021. One 2017 article noted that “carriers are migrating away from old technology standards and methods towards new, more efficient ones. As such, the older [3G] technology is going dark, and soon”—in AT&T’s case, by “the end of 2021.”<sup>20</sup> The article urged alarm companies to avoid repeating their mistakes of 2016, when “2G communication switched over to 3G and many dealers waited until systems failed to communicate before they started changing equipment, which is not a recipe for success.”<sup>21</sup> Equipment vendors sounded the same warning. For example, when Johnson Controls launched a new line of backward-compatible 4G/LTE devices in early 2018, it emphasized that the devices would enable alarm companies “to upgrade [alarm panels] without replacing the entire system with the knowledge that they have invested in a product that will be viable for many more years to come,” as “mobile providers have started to phase out their legacy 2G/3G communication networks.”<sup>22</sup>

In all events, even had there been some question about AT&T’s plans before 2019, AT&T formally answered it in February 2019, when it gave its business customers official notice

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<sup>19</sup> Because of confidentiality provisions, AT&T is not identifying the alarm companies or attaching their contracts to this publicly filed opposition, but on request it will provide this information to the Commission on a nonpublic basis.

<sup>20</sup> Missy Dalby, *Home Security Systems: Why You Need to Upgrade from 3G to 4G LTE Technology* (Sept. 1, 2017), <https://www.securityinformed.com/insights/home-security-prepare-4g-lte-upgrades-co-1049-ga-co-14288-ga.23624.html> (attached as Ex. C).

<sup>21</sup> *Id.*

<sup>22</sup> Press Release, Johnson Controls, *Johnson Controls Provides New LTE Solutions for Security and Alarm Communications* (Mar. 21, 2018), <https://www.johnsoncontrols.com/media-center/news/press-releases/2018/03/21/jci-provides-new-lte-solutions-for-security-and-alarm-communications>.

that it would turn off its 3G network in February 2022.<sup>23</sup> AICC does not argue that this “three-year transition period” (Pet. 5) was insufficient when announced, nor does it say whether alarm companies made serious progress on device upgrades during the first year—*i.e.*, from February 2019 to February 2020. Instead, it offers two main rationales for demanding a delay now: (1) the effects of the COVID-19 pandemic starting in March 2020, and (2) current global supply constraints for microchips. Neither rationale is persuasive, as discussed below.

Before turning to those topics, we note a critical point. Even though some alarm companies may have done very little to prepare for the 3G sunset during the past several years, they still have time to meet the long-announced February 2022 deadline. If exposed to competition, every alarm company will have adequate incentives to upgrade customers that are using obsolete 3G equipment, lest it lose those customers to other alarm companies better able to ensure connectivity for them. Ultimately, the only winners from a grant of this petition would be the alarm companies themselves, who could postpone that competition while pursuing more lucrative opportunities, such as installing alarm systems for new customers and upgrading existing high-end customers to elaborate smart-home systems.

## **B. The COVID-19 Rationale for Delay Is Untenable.**

The petition claims that the alarm industry has “lost ... fourteen months” (and counting) in upgrading obsolete 3G devices because, it says, “most consumers and businesses are fearful of letting strangers into their homes or offices during COVID.” Pet. ii. That claim is not credible: it is flatly inconsistent with representations that America’s leading alarm companies have made to

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<sup>23</sup> AT&T sent formal notifications of the February 2022 sunset to its customers on February 21, 2019. See Ex. D; see also *AT&T to Shut Down 3G Network in 2022; Verizon at End of 2019*, IEEE ComSoc Tech. Blog (Feb. 22, 2019), <https://techblog.comsoc.org/2019/02/22/att-to-shut-down-3g-network-in-2022-verizon-at-end-of-2019/>.



their investors since the second quarter of 2020. In fact, those investor presentations confirm, in the words of Resideo CEO Jay Geldmacher, that “COVID-19 dynamics shifted from a meaningful headwind in the second quarter [of 2020] to a tailwind in Q3,”<sup>24</sup> where they have remained ever since. The pandemic has not *deterred* technician visits to customer’s homes; if anything, it has accelerated them.

Consider the investor presentations of ADT, which “serves more than 6 million residential, small business, and larger commercial customers.”<sup>25</sup> In August 2020, looking back on his company’s performance in the second quarter (April–June 2020), ADT’s CEO remarked:

*I am both pleased and proud that the ADT team quickly moved from navigating during a challenging time to simply thriving. ... [N]ew residential sales ... finished the quarter strong with each month better than the prior month. As shared during our first quarter call, COVID-19 and shelter-in-place restrictions, negatively impacted our business in late March and in April before sales demand improved during the course of May and spiked higher in June. With our June U.S. residential RMR additions up on a year-over-year basis[, n]et customer additions remained positive for the first 6 months of the year.”<sup>26</sup>*

He returned to the same theme earlier this year, lauding ADT’s performance for 2020 as a whole: “we grew our net subscribers for the full year. ... U.S. RMR [‘recurring monthly revenues’] additions increased year-over-year 10% in the third quarter and 15% in the fourth quarter.”<sup>27</sup> ADT’s success continues; in an earnings call earlier this month, its CEO reported that “[w]e had a terrific first half of the year”—*i.e.*, January–June 2021—and “[w]e’re optimistic about the

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<sup>24</sup> Resideo Technologies, Inc., FQ3 2020 Earnings Call Transcripts at 4 (S&P Glob. Mkt. Intel. Nov. 5, 2020).

<sup>25</sup> ADT, *Fact Sheet*, <https://news.adt.com/press-tools/adt-fact-sheets> (visited Aug. 24, 2021).

<sup>26</sup> ADT Inc., FQ2 2020 Earnings Call Transcripts at 4-5 (S&P Glob. Mkt. Intel. Aug. 5, 2020) (emphases added).

<sup>27</sup> ADT Inc., FQ4 2020 Earnings Call Transcripts at 5 (S&P Glob. Mkt. Intel. Feb. 25, 2021); see also Paul Ragusa, *ADT Reports Increases in RMR, Subscribers in Q4*, Sec. Sys. News (Feb. 26, 2021), <https://www.securitysystemsnews.com/article/adt-reports-increases-in-rmr-subscribers-in-q4>.

second half of the year.”<sup>28</sup> In particular, the second quarter of 2021 was “a great installation quarter for us,” “up 13%” from levels obtained in the pre-pandemic world of 2019.<sup>29</sup>

A similar success story appears in the investor presentations of Vivint, another leading alarm company with “1.7 million customers throughout the U.S. and Canada.”<sup>30</sup> In late 2020, looking back over his company’s third-quarter performance (July-September 2020), Vivint’s CEO stated:

Our national inside sales channel continued its standout performance, generating *32% year-over-year growth in new subscribers*. Meanwhile, our direct-to-home sales channel rebounded nicely from the COVID-related constraints earlier in the year, growing new subscriber adds by 5% versus the prior year period. ... *So when you really look at our sales performance, customer adds and revenue, it’s not good, it’s outstanding.*<sup>31</sup>

He later touted his company’s success throughout 2020: “We originated over 343,000 new smart home subscribers this past year, *which was an acceleration from the previous year and the highest we’ve ever achieved in a year.*”<sup>32</sup> That success, he explained, arose from the social-distancing consequences of COVID itself: “[W]e have benefited from people being home, being more engaged with their home.”<sup>33</sup>

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<sup>28</sup> ADT Inc., FQ2 2021 Earnings Call Transcripts at 11 (S&P Glob. Mkt. Intel. Aug. 4, 2021).

<sup>29</sup> *Id.* at 10-11.

<sup>30</sup> Vivint, *Company Profile*, <https://investors.vivint.com/company-profile/default.aspx> (last visited Aug. 24, 2021).

<sup>31</sup> Vivint Smart Home, Inc., FQ3 2020 Earnings Call Transcripts at 5, 16 (S&P Glob. Mkt. Intel. Nov. 4, 2020) (emphases added).

<sup>32</sup> Vivint Smart Home, Inc., FQ4 2020 Earnings Call Transcripts at 4 (S&P Glob. Mkt. Intel. Feb. 4, 2021) (emphasis added).

<sup>33</sup> Vivint Smart Home, Inc., FQ3 2020 Earnings Call Transcripts at 16 (S&P Glob. Mkt. Intel. Nov. 4, 2020); *see also* Vivint Smart Home, Inc., FQ2 2021 Earnings Call Transcripts at 10 (S&P Glob. Mkt. Intel. Aug. 3, 2021) (“So you’re seeing ... more people in the home, thinking about their home, I think that’s here to stay. And so we’ve seen some stronger demand ....”).

The CEO of Resideo (formerly Honeywell) reaffirmed this explanation for the industry's success in his own presentations to investors:

Across the business, COVID-19 dynamics shifted from a meaningful headwind in the second quarter to a tailwind in Q3. As we indicated on our Q2 call, underlying demand and customer behavior trended positive as Q2 progressed and into July. This momentum accelerated as we move through the third quarter. *People continue to spend more time in their homes, which we believe is creating increased attention on the home and a desire to invest, driving demand for renovation and repair projects and home security.*<sup>34</sup>

He returned to the same themes earlier this year:

Demand in our residential markets remain[s] robust.... Following a challenging first half of the year, we saw a meaningful improvement in end market demand beginning in the early summer. ... As we enter 2021, we see a number of positive structural trends across the markets we serve. *People continue to spend more time in their homes and are directing their attention and investment to renovation and repair projects. Security has risen in prominence in the minds of many home and business owners.*<sup>35</sup>

He concluded: “We entered 2021 in a much stronger position than where we were 12 months ago”—*i.e.*, in the *pre-pandemic world of January 2020*—“both as an organization and the demand we see across our markets.”<sup>36</sup> And earlier this month, he “saw strong demand across markets ... This is a continuation of the positive trends we have seen since the middle of 2020 as investments in home and security solutions remain priorities for many individuals.”<sup>37</sup>

The same narrative of success also appears in the financial reports of Alarm.com, another industry leader whose “platforms currently support millions of residential and commercial

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<sup>34</sup> Resideo Technologies, Inc., FQ3 2020 Earnings Call Transcripts at 4 (S&P Glob. Mkt. Intel. Nov. 5, 2020) (emphasis added).

<sup>35</sup> Resideo Technologies, Inc., FQ4 2020 Earnings Call Transcripts at 4-5 (S&P Glob. Mkt. Intel. Feb. 25, 2021) (emphasis added).

<sup>36</sup> *Id.* at 7.

<sup>37</sup> Resideo Technologies, Inc., FQ2 2021 Earnings Call Transcripts at 5 (S&P Glob. Mkt. Intel. Aug. 5, 2021).

subscribers.”<sup>38</sup> As a senior executive explained in one earnings call, “COVID meant people were home,” and “it was easier in many ways ... to get their time and attention to have them choose what system they want. That’s what we’re hearing from our service providers. *Customer[s] got very comfortable with the sort of COVID precautions that our service providers were taking for installation and for sales.*”<sup>39</sup> If anything, the company’s CEO told investors last fall, COVID may have fueled the company’s success in 2020 because “customers are home, they’re ready to take meetings. They want to invest in their home because they’re not traveling.... [Our success] may be induced by COVID. It may be something else going on. But we’re grabbing more turf and more subscribers than what we anticipated at the end of the year [2019]”—*i.e.*, before COVID struck.<sup>40</sup>

Indeed, the only “slowdown” that Alarm.com experienced was “in March and April” 2020.<sup>41</sup> By “the back half of the quarter”—*i.e.*, in May and June 2020—the company had already gained “decent momentum in new account installation.”<sup>42</sup> Even by that point, the company’s CEO noted in August 2020, consumers “seemed mostly comfortable with allowing our partners to operate inside their property” and “were *more available for sales visits, more available for installations*” because “you’ve got a lot of consumers that are at home and can get stuff done.”<sup>43</sup>

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<sup>38</sup> Alarm.com Holdings, Inc., Annual Report (Form 10-K) at 14 (Feb. 25, 2021).

<sup>39</sup> Alarm.com Holdings, Inc., FQ4 2020 Earnings Call Transcripts at 14 (S&P Glob. Mkt. Intel. Feb. 25, 2021). Different transcripts for this earnings call identify either Alarm.com’s CEO or its CFO as the speaker in this passage.

<sup>40</sup> Alarm.com Holdings, Inc., FQ3 2020 Earnings Call Transcripts at 10-11 (S&P Glob. Mkt. Intel. Nov. 5, 2020).

<sup>41</sup> Alarm.com Holdings, Inc., FQ2 2020 Earnings Call Transcripts at 5 (S&P Glob. Mkt. Intel. Aug. 5, 2020).

<sup>42</sup> *Id.*

<sup>43</sup> *Id.* The alarm industry’s own petition unwittingly confirms the same point. As it acknowledges, “25 percent of ... appointments end without access to the premises” because “the customer has forgotten about the appointment or had a last-minute conflict arise.” Pet. 6. COVID-19 greatly diminished that

A year later, in August 2021, he reiterated that the company’s “performance has been particularly strong through the pandemic period.”<sup>44</sup> When asked whether “the Delta variant” had affected business, he answered “we haven’t seen any impact on the service provider’s ability to sell and install systems,” either in North American or Europe.<sup>45</sup>

The alarm industry trade press has confirmed the same conclusions. One industry retrospective, written in March 2021, confirmed that “[t]he tumultuousness of the past year certainly *benefited the security industry*” and that “many in the security industry fared much better than they originally expected — some, in fact, had *their best year yet*.”<sup>46</sup> The article quoted an industry spokesperson: “When I first learned about the pandemic, I wouldn’t have believed that people would allow installers into their homes. ... *I thought business would take a huge hit; but in fact, the business didn’t miss a beat. Even now, we are still seeing a huge demand for both product and installers, and that has remained consistent through the year.*”<sup>47</sup>

Indeed, even the October 2020 article cited in the petition itself (at 10) cuts against the alarm industry’s position here. That article explained that “[p]rofessional installation channels faced the most difficulty at the beginning of the pandemic”—*i.e.*, in early spring 2020—but that, “after the initial challenges of developing safe working practices for professional installers” were solved soon thereafter, alarm companies “were able to return to almost normal working

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phenomenon because, in the words of Alarm.com’s CEO, consumers were more likely to be “at home” during 2020 and thus “more available for installations.” Alarm.com Holdings, Inc., FQ2 2020 Earnings Call Transcripts at 14 (S&P Glob. Mkt. Intel. Aug. 5, 2020).

<sup>44</sup> Alarm.com Holdings, Inc., FQ2 2021 Earnings Call Transcripts at 6 (S&P Glob. Mkt. Intel. Aug. 5, 2021).

<sup>45</sup> *Id.* at 9.

<sup>46</sup> Courtney Wolfe, *COVID-19 & The Security Industry: One Year Later* (Mar. 1, 2021), <https://www.sdmmag.com/articles/99208-covid-19-the-security-industry-one-year-later> (emphases added).

<sup>47</sup> *Id.* (emphasis added).

patterns.”<sup>48</sup> Tellingly, the only other articles cited in the petition (at 10-11, 12) for the dubious proposition that the industry has “lost ... fourteen months” to COVID-19 social-distancing measures (Pet. ii) were written *in the first weeks of the pandemic*, just before business began booming. See Pet. 10-12 (quoting articles published on April 1, April 6, and May 11, 2020). Unsurprisingly, these articles turned out to be wrong about more than technician access to homes; for example, one predicted that the pandemic would cause a “devastating ... softening of the home building market.”<sup>49</sup>

In short, alarm companies have been fully capable since mid-May 2020 of deploying the large numbers of technicians they need and sending them into people’s homes to win new customers and upgrade existing customers. Because they were able to dispatch technicians for that lucrative purpose, they were also more than capable of entering homes for the more limited, less time-consuming purpose of swapping out a 3G device for a 4G device. The only plausible reason that some alarm companies prioritized the former activities over the latter was the greater profitability of the former; it had little or nothing to do with COVID access limitations.

The petition’s reliance on AT&T’s requested extension of Z-axis compliance (Pet. 11-12) casts no light whatsoever on the alarm industry’s own ability to enter customer locations. To begin with, the Commission *rejected* the requested Z-axis extension, and extracted monetary payments from AT&T and other providers, on the ground that COVID-19 was *not* a valid reason

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<sup>48</sup> Eifeh Strom, *How Home Security Installers Are Adapting to New COVID-19 Norms*, asmag.com (Oct. 12, 2020), <https://www.asmag.com/showpost/31950.aspx>.

<sup>49</sup> Paul Rothman, *Residential Security COVID Market Report*, SecurityInfoWatch.com (May 11, 2020), <https://www.securityinfowatch.com/residential-technologies/article/21134939/residential-security-covid-market-report>; cf. Jacob Passy, *New-Home Construction Activity Soars to Highest Level in Over a Decade, as Builders Rush to Produce Single-Family Homes*, MarketWatch (Jan. 23, 2021), <https://www.marketwatch.com/story/new-home-construction-activity-soars-to-highest-level-in-over-a-decade-as-builders-rush-to-produce-single-family-homes-2021-01-21>.

for delay.<sup>50</sup> Thus, even if it were relevant, the Z-axis proceeding would cut *against* the alarm-industry’s petition here. In any event, the wireless industry did not argue that it missed the Z-axis deadline because COVID made homeowners fearful of technician visits. The industry argued that it missed the deadline largely because the commercial owners of certain large multi-story buildings—the planned “test beds” for experiments on vertical-coordinate technologies—had little incentive to host the planned experiments and were “largely unresponsive” to requests for access to those buildings, some of which were closed.<sup>51</sup> In contrast, as confirmed by the alarm industry’s own executives, its technicians had *greater* access to consumer residences during the pandemic because consumers were more often home and felt an even greater need for security systems than before.

Finally, some alarm-system upgrades do not even require in-person technician visits to begin with. As AICC acknowledges (Pet. 7-8), the CellBounce device—a wireless adapter that converts incoming 3G signals into outgoing 4G signals—is a do-it-yourself solution that allows customers to upgrade their alarm systems without technician visits. The same is true of most “personal emergency response systems” (PERS), such as pendants or watches equipped with emergency buttons.

It is thus perplexing to read AICC’s unsupported assertion that the pandemic has impeded the replacement of these personal devices because “elderly customers who are at the greatest risk of dying from COVID are especially reluctant to allow an installer into their home.” Pet. 3, 10. A glance at the websites of leading PERS retailers reveals that medical alert systems, including

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<sup>50</sup> See, e.g., Order, *AT&T Servs. Inc.*, File No. EB-SED-21-00032059, DA 21-627 (June 3, 2021); Order on Reconsideration, *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, FCC 21-11 (Jan. 11, 2021).

<sup>51</sup> CTIA Petition for Reconsideration at 5, *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114 (Sept. 28, 2020).

home base stations and their connected devices, are typically mailed to consumers and designed for easy self-installation.<sup>52</sup> And even if some small fraction of elderly customers do need an in-home visit from a technician to make use of PERS products, they are likely to be vaccinated and familiar with further risk-mitigation protocols such as ventilation and mask-wearing.<sup>53</sup> Even as to such customers, there is no plausible COVID-based rationale for any alarm-industry failure to upgrade their devices.

### C. The “Chip Shortage” Rationale for Delay Is Also Untenable.

The petition alternatively asserts that a “world-wide chip set shortage” makes it impossible to replace 3G devices before the February 2022 sunset. Pet. ii. That assertion is unsubstantiated and unpersuasive—and, like AICC’s claims about COVID’s effects on customer visits, flatly at odds with the alarm industry’s own representations to investors.

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<sup>52</sup> See, e.g., GetSafe, *Set Up Your System*, <https://www.getsafe.com/customer-support/> (last visited Aug. 24, 2021) (noting that consumers can “[s]imply plug the power cord to an outlet” and “[t]urn the switch from ‘Off’ to ‘On,’” and adding that companion pendants and other devices “will already come paired” to the base stations accompanying them); Medical Alert, *How It Works*, <https://www.medicalalert.com/how-medical-alert-works/> (last visited Aug. 24, 2021) (“When you get your Medical Alert system, setting it up is a breeze. You just plug the base into a wall outlet and, if [you’re] using the At Home Landline system, connect the phone cord. Then turn it on. That’s it!”); OneCallAlert, [https://aff.onecallmedicalalert.com/best-10/?sub\\_id=hZlHmWcocN](https://aff.onecallmedicalalert.com/best-10/?sub_id=hZlHmWcocN) (last visited Aug. 24, 2021) (“Our systems are truly plug-and-play: simply plug them in, and they’re ready to provide you with the protection you need. And if there are ever any issues, our customer care and technical support teams are always available.”); Aloe Care Health, *Aloe Care Essentials*, [https://www.aloecare.com/products/essentials/?utm\\_source=natural&utm\\_campaign=des\\_ew46a5W1Yp](https://www.aloecare.com/products/essentials/?utm_source=natural&utm_campaign=des_ew46a5W1Yp) (last visited Aug. 24, 2021) (product “features contactless set-up to align with COVID-19 safety protocols”); LifeFone, *Frequently Asked Questions*, <https://www.lifefone.com/faq.html> (last visited Aug. 24, 2021) (“Q. Is it easy to install? A. Yes. The LifeFone medical alert systems are very easy to install. Our customers are typically able to install their system and test it with us in about ten (10) minutes. We provide you with simple instructions and a picture of what goes where. If you have any questions, you can call our customer service center 24/7 and we will walk you through the process.”).

<sup>53</sup> See Ctrs. for Disease Control & Prevention, *COVID-19 Vaccinations in the United States*, [https://covid.cdc.gov/covid-data-tracker/#vaccinations\\_vacc-total-admin-rate-total](https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-total-admin-rate-total) (last visited Aug. 24, 2021) (reporting that 91.4% of U.S. adults aged 65 or older have received at least one dose and that 81.2% have been fully vaccinated).



As the Commission is aware, the world-wide demand for various types of chipsets in the resurgent global economy exceeds the world-wide supply of those types of chipsets. That phenomenon is real, and it affects a broad variety of electronics-based goods and services, including some of AT&T's. But not all chipsets are equally affected. For example, some types of chipsets are not experiencing a shortage in the first place because supply remains sufficient to cover demand. And some chipsets that *are* affected by a supply-demand imbalance remain available for purchase, albeit at higher prices.<sup>54</sup>

That context is important, yet AICC completely ignores it. The petition features a great deal of hand-waving about a "chip shortage" in the abstract. *See, e.g.*, Pet. 15-16. But it never substantiates, with declarations or otherwise, its assertion that the shortage affects the chipsets that particular alarm companies use in 4G radios, despite those companies' own avowed success in installing new devices for new customers throughout 2000 and 2021.<sup>55</sup> The petition also does not substantiate its implicit yet equally essential premise that any asserted shortage severely delays the *timetable* for upgrading obsolete 3G devices rather than simply raising the component *price* of doing so.<sup>56</sup>

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<sup>54</sup> *See, e.g.*, Asa Fitch, *Chip Shortages Are Starting to Hit Consumers. Higher Prices Are Likely*, Wall St. J. (June 21, 2021), <https://www.wsj.com/articles/chip-shortages-are-starting-to-hit-consumers-higher-prices-are-likely-11624276801> ("The global chip shortage is pushing up prices of items such as laptops and printers and is threatening to do the same to other top-selling devices including smartphones. ... [M]any of the world's large chip makers are raising prices they charge to the brands that make PCs and other gadgets.").

<sup>55</sup> *See* Section III.B, *supra*. For example, the petition does not substantiate its bare assertion (at 8) that a chip shortage has temporarily slowed production of CellBounce devices, let alone explain why such a temporary slowdown, if it existed, would prevent those devices from playing an important role in helping alarm companies meet the 3G sunset deadline next February. In all events, alarm companies do not need to rely on CellBounce or other do-it-yourself options in the first place; they can send technicians to perform the necessary upgrades, just as they could do unconstrained before March 2020, on a limited basis during the first weeks of the pandemic, and then relatively unconstrained once more since late spring 2020.

<sup>56</sup> *See* note 60, *infra*.

The lack of substantiation on these points is no surprise because the alarm companies' own investor presentations in fact contradict the petition's claim that the global chip shortage has significantly impaired the industry's ability to install and upgrade system components. For example, when AICC filed this petition in May 2021, it highlighted Vivint in particular as "experiencing microchip delays, a situation which is expected to worsen in the coming months before it improves." Pet. 16. Three months later, in response to an analyst question about supply constraints, Vivint's CEO reassured investors that "the team worked hard and with our partners to find solutions" and that "we've navigated through [the supply constraints] so far and feel very confident for the balance of the year."<sup>57</sup>

Other leading alarm companies have conveyed the same message to their investors. For example, earlier this month, Alarm.com's CEO answered as follows in response to a question about whether supply constraints would keep his company from meeting surging demand:

[W]e have out there right now about 85%, 90% of what we would like to have floating around. So are there shortages of some components? Yes. There are shortages of some components. *Are they materially impacting the commercial service providers today? No.* A service provider can say, okay, I don't have this particular device at the moment, but I have a substitute device that is almost as good or almost as effective in this situation, I'm going to install that one. ... [T]hus far we have been able to deploy capital in securing the supply chain and keep things moving, I think, pretty effectively. And we feel like *that will likely be the case as we go into Q3 and Q4.*<sup>58</sup>

Similarly, Resideo's CEO affirmed earlier this month that his company's performance "reflects positive market trends" and that "[s]ignificant improvements in operational execution ha[ve]

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<sup>57</sup> Vivint Smart Home, Inc., FQ2 2021 Earnings Call Transcripts at 10 (S&P Glob. Mkt. Intel. Aug. 3, 2021).

<sup>58</sup> Alarm.com Holdings, Inc., FQ2 2021 Earnings Call Transcripts at 12 (S&P Glob. Mkt. Intel. Aug. 5, 2021) (emphases added).

allowed us to successfully manage the difficult and dynamic supply chain and logistics environment.”<sup>59</sup>

In short, whatever the precise dimensions of the global chip shortage, it has not kept the major alarm companies from continued success in winning and activating new customers, as confirmed by the highly positive investor presentations summarized above. Evidently, those companies *can* obtain the chipsets needed for the unprecedented successes they tout in signing up new customers and installing new alarm devices. It strains credulity to suppose that these companies nonetheless *cannot* obtain, at any price, the garden-variety chips needed to upgrade devices from 3G to 4G radios. In all events, it was AICC’s burden to prove that highly counterintuitive point, and it has not even tried.

More likely, to the extent the global chip shortage has affected alarm companies, it has mainly raised input prices for some of the affected chips.<sup>60</sup> If so, those companies might well have decided to focus their purchasing strategy on the chips necessary to wire new homes and sign-up new customers for lucrative long-term contracts. And perhaps they have chosen to wait until shortages ease and prices fall before undertaking the less lucrative but equally important task of upgrading the obsolete 3G devices used by long-time customers without service contracts. That strategy might be understandable from the perspective of an alarm company’s

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<sup>59</sup> Resideo Technologies, Inc., FQ2 2021 Earnings Call Transcripts at 4 (S&P Glob. Mkt. Intel. Aug. 5, 2021).

<sup>60</sup> *Cf.* Alarm.com Holdings, Inc., FQ2 2021 Earnings Call Transcripts at 7 (S&P Glob. Mkt. Intel. Aug. 5, 2021) (noting that “[h]ardware gross margin” had declined slightly, “somewhat due to increased supply chain costs” such as “higher air freight costs” as a result of “expedite[d] shipments” to ensure adequate inventory); Resideo Technologies, Inc., FQ2 2021 Earnings Call Transcripts at 9 (S&P Glob. Mkt. Intel. Aug. 5, 2021) (customers will accept price increases because “people understand that our costs are going up”).

financial self-interest. But it would not be a basis for delaying AT&T's long-planned 3G sunset and thereby impeding the 5G rollout.

### CONCLUSION

The alarm industry's petition for a delay in AT&T's 3G sunset should be denied.

Respectfully submitted,



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August 30, 2021

**Exhibit A**

Before the  
Federal Communications Commission  
Washington, D.C. 20554

<hr/>	)	
In the Matter of	)	
	)	GN Docket No. 21-304
Petition for Emergency Relief Due in 3G	)	
Sunset Transition for Central Station Alarm	)	
Subscribers	)	
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**DECLARATION OF LISA PARK**

I, Lisa Park, pursuant to 28 U.S.C. § 1746 and 47 CFR § 1.16, declare and state as follows:

1. I have worked at AT&T for 24 years and currently serve as the company's Assistant Vice President of Business Development for AT&T's Internet of Things (IoT) global business. In that role, among other responsibilities, I oversee the accounts of customers seeking IoT solutions from AT&T, including alarm companies. I have personal knowledge of the facts set forth below and submit this declaration in support of AT&T's response to the petition by the Alarm Industry Communications Committee to delay AT&T's 3G sunset.

2. AT&T's contracts with AT&T IoT customers accounting for the overwhelming majority of AT&T's IoT connections are individually negotiated, and the counterparties to AT&T in those negotiations are sophisticated business customers.

3. AT&T's contracts with the alarm companies accounting for the overwhelming majority of alarm systems are likewise individually negotiated, and AT&T's counterparties in those negotiations are also sophisticated business customers.

4. The IoT services offered by AT&T are inherently mobile in nature. They consist of two elements: a SIM card and connectivity to AT&T's mobile network. Customers accounting for the overwhelming majority of IoT connections rely on the mobility feature of AT&T's IoT services for their needs, such as connected car services, vehicle telematics, and tracking services for physical items such as packages, shipping containers, land fleets, and farm equipment. Alarm companies also purchase connectivity to AT&T's IoT mobile network, and may or may not use the included mobility features for any given customer they serve.

5. AT&T's IoT services are point-to-point services that connect an individual end user location with an IoT customer's monitoring system. In general, an IoT service does not, and

is not intended to, enable an end user to communicate instead with the millions of endpoints on the public switched network.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: August 25, 2021

Atlanta, Georgia

A handwritten signature in black ink, reading "Lisa A. Park", written over a horizontal line.

Lisa Park

**Exhibit B**

Before the  
Federal Communications Commission  
Washington, D.C. 20554

_____	)	
In the Matter of	)	
	)	GN Docket No. 21-304
Petition for Emergency Relief Due in 3G	)	
Sunset Transition for Central Station Alarm	)	
Subscribers	)	
_____	)	

**DECLARATION OF KEVIN HETRICK**



I, Kevin Hetrick, pursuant to 28 U.S.C. § 1746 and 47 CFR § 1.16, declare and state as follows:

1. I have worked at AT&T for 25 years and currently serve as the company's Vice President of Access Construction & Engineering. In that role, I am responsible for, among other responsibilities, decisions regarding how to deploy AT&T's spectrum holdings and other network assets to optimize the performance of the company's wireless operations. I have personal knowledge of the facts set forth below and submit this declaration in support of AT&T's response to the petition by the Alarm Industry Communications Committee ("AICC") to delay AT&T's 3G sunset.

2. AT&T's nationwide 5G network currently relies on low-band spectrum—in particular, the 850 MHz spectrum blocks not used for 3G—and in the near future will rely primarily on mid-band spectrum, including its C-Band assets, for added 5G capacity. After the 3G sunset, AT&T will add the 850 MHz spectrum at issue here, refarmed from 3G, to enhance 5G capacity and coverage.

3. Currently, AT&T devotes only a narrow 10-megahertz sliver of 850 MHz spectrum to its 5G network in the form of paired 5x5 channels (five megahertz for downlink transmissions and five megahertz for uplink transmissions). While this is sufficient to support today's lower levels of 5G traffic, it is insufficient to support expected 5G traffic volumes during 2022. To meet customer demand, AT&T will implement two crucial steps.

4. *First*, by year-end 2021, AT&T will begin to expand its 5G network capacity by adding C-Band (3.7 GHz) spectrum in increasing numbers of markets. Compared to 850 MHz spectrum, however, C-Band spectrum propagates over shorter distances, reducing its utility for filling gaps in network coverage in less populous areas, particularly for the lower-power uplink

transmissions from handsets to towers. As a result, as customers approach the edge of a C-Band coverage area, they will lose uplink connectivity on the band. Such customers will need to rely solely on 850 MHz spectrum for uplink 5G transmissions. But AT&T's existing five-megahertz uplink channel in the 850 MHz band will be insufficient to meet expected traffic demand in 2022.

5. *Second*, to address that concern, AT&T plans to double its allocation of 850 MHz spectrum to 5G by repurposing the 10 megahertz of spectrum that is now used for obsolescent 3G technologies. Combining that 10 megahertz of refarmed 850 MHz spectrum with the 10 megahertz of 850 MHz spectrum already used for 5G will dedicate 20 megahertz of 850 MHz spectrum to 5G, in the form of 10x10 channels (10 megahertz uplink x 10 megahertz downlink). Doubling the 850 MHz spectrum available in this manner will increase the 5G network's uplink and downlink capacity, greatly improving the performance and efficiency of AT&T's network for the benefit of its customers.

6. AT&T's plan cannot proceed, however, so long as AT&T must keep operating its 3G network, even for a single legacy 3G user. AT&T has used UMTS as its 3G standard since 2004. UMTS requires, at a minimum, paired 5x5 channels—five megahertz for uplink and five megahertz for downlink. Because it is not feasible as an engineering matter to support both UMTS and 5G standards on the same 5x5 block, AT&T has for many years reserved this 10-megahertz block of spectrum solely for 3G even as the number of customers using its 3G network dwindled. Continuing to reserve that 10-megahertz channel for 3G is now grossly inefficient: 3G traffic today utilizes less than 4% of that channel's capacity. In short, AT&T cannot repurpose that critical block of 850 MHz spectrum for 5G until after it has shut down the 3G network.

7. The alarm industry's proposed ten-month delay in that 3G sunset would undercut AT&T's 5G rollout and overall network performance. In particular, the failure to upgrade AT&T's current 5x5 megahertz channels of 850 MHz spectrum into 10x10 megahertz channels would increase the rate of busy-hour "blocking" in cell sectors across virtually all geographic markets. In affected areas, the result would be more blocked and dropped calls and lower data throughout. Such network degradation could affect tens of millions of customers over the course of 2022 if AICC's petition is granted.

8. Although AT&T has spectrum holdings in other bands, it cannot repurpose them (instead of 850 MHz spectrum) for 5G within the foreseeable future to capture the lost 850 MHz network capacity. Instead, AT&T must continue using those bands to support an embedded base of tens of millions of customers—including alarm companies, other enterprise customers, and ordinary consumers—who rely on AT&T's 4G/LTE network for network connectivity. AT&T will need to maintain its 4G/LTE network on existing spectrum bands for years to come, given the sheer volume of devices in operation today that are not 5G-capable.

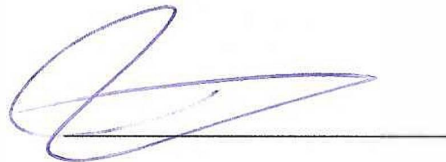
9. I understand that the alarm industry is claiming that Verizon's decision to postpone its 3G sunset until year-end 2022 suggests that AT&T could feasibly postpone its own 3G sunset until the same date. That comparison is inapt because the two companies use materially different 3G technologies. In contrast to AT&T's UMTS technologies, Verizon's network relies on CDMA/EVDO as its 3G standard. A 3G network based on that standard can operate with paired 1.25 megahertz channels, which are far narrower slices of spectrum than the 5x5 pair required to serve even a single UMTS customer on AT&T's network. For that reason, in many markets Verizon would be able to dedicate a full 20 megahertz of 850 MHz spectrum to its

LTE or 5G network while still supporting 3G legacy users on its CDMA/EVDO network. Again, AT&T does not have that option because of the minimum spectrum needs of UMTS.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: August 25, 2021

Dallas, Texas



Kevin Hetrick

## Home Security Systems: Why You Need To Upgrade From 3G To 4G LTE Technology

*Published on 1 Sep 2017*



**“Netflix,” “twerk” and “selfie” were added to the dictionary. Boston Marathon bombing. Activist Nelson Mandela and actor Paul Walker died. Edward Snowden gave NSA classified documents to Wikileaks. These events may seem like they happened only yesterday, but they are some of the top news headlines from four years ago. Four years can feel like a very short time, and in four short years, every security panel installed by dealers to date will go dark.**

The current communication method for most home security systems is via CDMA and 3G (GSM) technologies. With the emergence of faster, better, and stronger 4G LTE technology, carriers are migrating away from old technology standards and methods towards new, more efficient ones. As such, the older technology is going dark, and soon.

One year ago, AT&T stopped certifying new 3G parts. Meaning manufacturers of cellular modules, like Nortek Security & Control, have stopped making them. At the end of 2018 they will stop letting customers add systems utilising 3G radios to their channels. Knowing this, dealer programs like Monitronics and Guardian have already stopped or have significantly slowed the acceptance of 3G operated systems.

## Shifting From 2G To 3G Technology

One of the big questions asked by most security dealers is: Should I roll a truck to replace the panel/cellular communication? To appropriately answer, let's take a look back at the last time a shift in technology like this occurred. In 2016, 2G communication switched over to 3G and many dealers waited until systems failed to communicate before they started changing equipment, which is not a recipe for success.

To be fair, network providers don't turn off bandwidth and access points like switching off a light. It starts slowly, as the provider starts to allow the technology to degrade over time. What dealers will experience is that parts of their service area will start to go down, or the service will become much slower than normal. Unfortunately, there is not a published schedule for where and when the services will decline, so the best advice is to begin to change the entire customer base early to avoid disruption.

With that in mind, the answer about rolling a truck is a resounding yes. Dealers should figure out how many ticking time bombs they have, figuratively speaking, and start laying out a plan to upgrade them over time. Waiting can be a costly move that proves to be deadly to their business. It's ideal to plan for the longest window to make this change to ensure that the majority of your customer accounts don't sunset at once.

## Understanding 4G, 3G And CDMA

The cellular market is shifting away from older communications standards with all major carriers quickly adopting 4G LTE technology. The benefits of LTE are a faster network and more



broadband, which equates to faster Over-the-Air (OTA) programming and updating, and extended life without the need to roll a truck. Customers will experience faster home control response and faster streaming of CCTV video. Many telecommunications providers are rolling out their 4G LTE offerings.

For example, Verizon's 4G LTE network offers a super-fast cellular connection and the robust data capacity needed to rapidly deliver interactive services. AT&T is also rolling out 4G LTE, but due to coverage concerns, those radios will also be backward compatible with 3G – for a while. That backward compatibility tends to lead to more expensive radios, but ensures that the new radio you install today will work today and for years to come.



The cellular market is shifting away from older communications standards with all major carriers quickly adopting 4G LTE technology

These networks help lay the foundation for how smart device technology interacts with a home security system and on which network. This also allows for channel connection and using the network to send push alert notifications, updates, and other new and timely information.

## LTE Cat 1 Vs. Cat 3 And VoLTE

Another nuance of LTE is Category 1 (Cat 1) vs. Category 3 (Cat 3) LTE. Cat 3 LTE is what is available now and offers data transfer speeds and voice quality similar to the smart phone on which you may be reading this article. Cat 1 LTE are less expensive modules and are available for data only applications but, the industry is waiting for VoLTE (Voice over LTE) certification on Cat 1 to ensure two-way voice functionality. Word is that lower cost LTE will be available soon, however the date is still unknown. The trade-off is lower speed (100 Mbps to 10 Mbps) but for the data transmitted by security systems the speed (security panel application) is not noticeable. Cat 3 supports two-way voice today.

The latest sunset dates for existing cellular technologies came straight from Verizon and AT&T. Verizon is pushing to be the first U.S. based network fully on LTE, so they have an aggressive sunset date of December 31, 2019. AT&T is also working to switch to LTE, although their window for sunset is longer: the end of 2021. That said, AT&T has warned cellular module makers that at the end of 2018, they will no longer issue SIM cards for 3G devices, which moves up the need to jump on the LTE train significantly.

***AT&T has warned cellular module makers that at the end of 2018, they will no longer issue SIM cards for 3G devices***

## Cost-efficient System Upgrades

The choice is simple; do you want to create a plan to upgrade your current installation base and avoid costly disruptions of service and potential loss of customers, or wait until that decision is forced upon you? If you wait, you may find that entire sections of the towns or states that you cover go out overnight, leading to a service nightmare. Of course, there is a cost to making these



service calls. After polling several dealers, I found that the costs hover between \$150 and \$250, including the cost of the new radio. This can also take a needed technician away from a new install.

So, how can dealers try to turn the lemons of this forced change into lemonade? By finding ways to turn this need to upgrade equipment into a profitable visit. As service technicians plan for routine service calls, map out nearby customers and see if they are willing to have the technician that is already in the area make a stop to upgrade their system.

## Prepare For Future Technological Updates

Some savvy dealers are offering promotions during these upgrades, offering home automation devices or new doorbell cameras, where they profit off of the sale of the new equipment and any increase in RMR helps to defray the costs of the service call. The new solutions also benefit the homeowner and make their system more valuable to them, which creates a win-win.

Finally, be forward thinking and also switch out the panel to one with a replaceable cell sled, like the 2GIG GC3, so for future technological updates you don't have to roll a truck and only have to mail out a new radio.

**The change is coming – will you be ready?**

[View this article on SecurityInformed.com.](#)

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## Important Information Regarding Your 3G IoT Service from AT&T

### NOTICE OF FUTURE 3G NETWORK TRANSITION AND DEVICE ACTIVATION DISCONTINUANCE

February 21, 2019

*This notice may impact others within your organization. Please forward this letter to those individuals in your company who may have mobile communications responsibilities for connected device services.*

To help address the growing customer demand for mobile services, **AT&T plans to fully discontinue service on our 3G network in February 2022.** This will enable us to free up valuable spectrum and provide increased speed and capacity for our more advanced technologies like 4G LTE, low-power wide-area (LPWA) networks and 5G.

In some markets, it may be necessary for us to turn down one band of our owned and operated 3G network, such as 1900 MHz or 850 MHz service, ahead of February 2022.

To prepare for this transition, **we are providing notice that you must stop activating or reactivating SIMs that use 3G technology.** Specifically, if your agreement with AT&T currently allows 3G activations or reactivations and lists a 3G stop activation date, you must stop on that date. If no date is listed, you must stop within one year from the date of this letter or the end of the 3G stop activation notice period in your agreement, whichever is later.

**We strongly encourage our customers to begin migrating all 3G devices to 4G LTE or LPWA networks as soon as possible.** Your AT&T account team is ready to offer guidance and expertise to help make this transition as smooth as possible.

We've also established a website that provides valuable information on migration planning, specifically for our IoT customers. It provides resources such as a current list of certified 4G LTE and LTE-M equipment manufacturers. Plus, information about our IoT Accelerator Program could provide reduced equipment pricing. We will update the website with new information as it becomes available.

Please visit [www.att.com/LTEupgrade](http://www.att.com/LTEupgrade) regularly for updated information.

We value you as a customer and understand the importance that wireless data communication means to your business. We thank you for your continued loyalty to AT&T and look forward to continuing to serve you in the future.